GEF Small Grants Programme
Community-Based Adaptation in Small Island Developing States - SIDS CBA

Improved Water Management and Capacity Building for Climate Change in Longueira and Covoada

Project No: CPV/SIDS-CBA/12/23

Grantee: Associação Amigos Desenvolvimento Comunitário Covoada Orgãos

Location: Longueira and Covada Santiago Island, Cabo Verde

SGP Contribution: US$ 10,000

Cash Co-Financing: US$ 8,963

In-Kind Co-Financing: US$ 16,728

Project Duration: 9 months (11/2012 - 07/2013)

Number of people served: 12 farmers

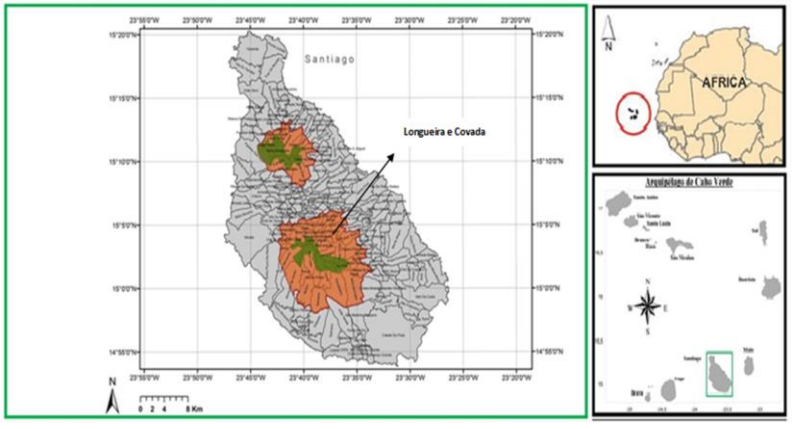
Focal area: Climate Change Adaptation

Background

Cape Verde is a small island nation in Africa's Sahel region, located approximately 500 km off the coast of Senegal in West Africa. It consists of 10 islands and several islets totalling 4.033 km^2 of land area with limited natural resources.

Its semi-arid climate is strongly influenced by its rugged topography and marked by two seasons: a tropical season with irregular rainfall from August to October and a harsh dry season from late October to mid-July. The average annual rainfall across the islands is 225 mm. The average annual temperature is 25 ºC degrees and annual sea-surface temperature varies from 18 ºC to 27 ºC. Water from streams is not permanent and stream flow is ephemeral as it only occurs during the rainy season after a heavy rainfall event.

Santiago Island is Cape Verde's largest island. It is home to 50% of the nations' population and is the most important agriculture center. The São Lourenço dos Órgãos municipality[1] is located in the center of Santiago Island where the local communities of Longueira and Covoada live inside Serra do Pico de Antónia Natural Park area. These communities are highly dependent on livestock and rain-fed small scale farming of carrots, cabbages, cassavas, corn, beans, potatoes, sweet potatoes and tomatoes for their livelihoods. Over the years, they have been noticing increased incidences of droughts as well as variable rainfall, yet torrential when they come. As a result, their water access from an upland spring and community well have been unreliable and agricultural lands have been damaged with severe soil erosion. Moreover, their unsustainable agricultural activities



[1] Population of 7,339 residents (2010 census)

Contacts

Associação Amigos Desenvolvimento Comunitário Desenvolvimento Comunitário
Adilson Reis
President
Tel: +238 271 1138

GEF SGP Cabo Verde
Ricardo Monteiro
National Coordinator
United Nations Development Programme
UNDP Tel: +238 260 9688
Email: ricardom@unops.org

GEF Small Grants Programme
Charles Nyandiga and Annalisa Jose
Central Programme Management Team
304 East 45th Street, 9th Floor
New York, NY 10017
Email: sgp.info@undp.org

such as using exorbitant amounts of irrigation water causes floods and top soil loss and yet, the high costs of micro-irrigation systems limit their potential to cope. Water insecurity, agricultural unreliability and health hazards pervaded the area. As such, the communities approached the GEF Small Grants Programme (SGP) for support.

Project Objectives and Key Activities

The project's objective was to strengthen the communities' resilience to the impacts of climate change and its variability through awareness-raising and capacity building activities in water security and natural resource management. Building on local knowledge and using a participatory approach, awareness-raising workshops were held on climate change, its short-term and long-term impacts on the communities, how they can cope in a sustainable way and how national policies can be influenced by their actions.

Prolonged droughts and anthropogenic pressures degrade the lands of Cape Verde's Longueira and Covada communities.

The project activities for water security included the installation and maintenance of micro-irrigation systems, construction of a 50 m^3 water tank of in Longueira and rehabilitation of a community water well in Covada. These activities improved availability and quality or irrigation and potable water, especially during incidences of floods and droughts. The water management initiatives supported agricultural activities which included the identification of drought-tolerant crops, especially those with high market value. In turn, these have led to food and water security, as well as income generating options.

Environmental Impact

The installation of micro-irrigation systems on farmers' lands have restored .44 hectares of land, enabled water conservation and have decreased water stress on community wells and springs. The use of organic fertilizer and planting of additional varieties of drought-tolerant species such as melons, garlic and small-scale sugar plantations have resulted to improved cover cropping, increased tree cover and soil restoration. Moreover, replacing the communities' unsustainable traditional agricultural practices, which required using too much water, with drip irrigation have decreased the loss of fertile topsoil.

Community-installed micro-irrigation systems (left photo) increase crop cover, improve soil quality and thus, result to ecosystem restoration (middle and right photos).

Contacts

Associação Amigos Desenvolvimento Comunitário Desenvolvimento Comunitário
Adilson Reis
President
Tel: +238 271 1138

GEF SGP Cabo Verde
Ricardo Monteiro
National Coordinator
United Nations Development Programme
UNDP Tel: +238 260 9688
Email: ricardom@unops.org

GEF Small Grants Programme
Charles Nyandiga and Annalisa Jose
Central Programme Management Team
304 East 45th Street, 9th Floor
New York, NY 10017
Email: sgp.info@undp.org

Socio-Economic Impact

The awareness-raising and capacity building activities have improved the communities' understanding of climate risks and on sustainable adaptation practices in natural resource management. Increased access to water from conservation tanks and use of micro-irrigation systems have enabled them to farm during drought periods. As a result, the average household monthly income had increases ranging from 258% to 1115%. While the male farmers' monthly incomes increased from US$ 89 to US$ 319 (+258%), the average income of the women farmers soared from US$ 26 to $US 315 (+1115%), including two women with no previous stable income and now earning approximately US$ 135 per month.

This CBA project has shown that, with support, empowered and motivated community members can find sustainable ways to adapt to climate risks that conserve their habitats while simultaneously improving their livelihoods. As stated by Adilson Reis, President of the CBO, "*It´s clear that climate change is impacting this community, and project activities have enabled farmers to practice sustainable irrigation*". He goes even further to say that "*I do see new practices have been generating resources to families and it is clear that there is impact on food security, and farmers' income, especially the ones led by women*."

The communities' average income increased by 258% to 1115% due to micro-irrigation farming of cassavas, potatoes, sugar cane, tomatoes and papaya (left and right photos), which enabled them to farm even during drought periods.

Policy Impact, Replication and Upscaling

The project has served as a demonstration site and a platform of interactions for multilevel stakeholders such as civil society, government officials, SGP and the GEF. Best practices have been up-scaled to a GEF full-size project at the national level "Building adaptive capacity and resilience to climate change in the water sector in Cape Verde". These collaborations were significant and concrete steps to support Cabo Verde climate change priorities, especially on ways to promote the integration of water resources management and food security.

The project directly influenced the National Adaptation Programme of Action on Climate Change (NAPA), the Action Plan for Integrated Water Resources Management (PAGIRE), and the National Food Security and Nutrition Strategy, specifically on *Strengthening the capacity of communities to adapt to climate risks and provision of alternative food generating opportunities, and promotion of growing techniques and varieties of crops suitable to the climatic conditions*. The initiative

Contacts

Associação Amigos Desenvolvimento Comunitário Desenvolvimento Comunitário
Adilson Reis
President
Tel: +238 271 1138

GEF SGP Cabo Verde
Ricardo Monteiro
National Coordinator
United Nations Development Programme
UNDP Tel: +238 260 9688
Email: ricardom@unops.org

GEF Small Grants Programme
Charles Nyandiga and Annalisa Jose
Central Programme Management Team
304 East 45th Street, 9th Floor
New York, NY 10017
Email: sgp.info@undp.org

further influenced the National Plan for Gender Equality, on *increased support for rural and peri-urban women in participating in programs to combat poverty and improve food security and living conditions from a gender perspective*.

Gender Mainstreaming

Traditionally, most farmers are men and the agriculture sector is led by men in Cabo Verde. In Covada and Longueira, 50% of community members involved in the project were women and thus, providing equal opportunity for benefits to men and women. Additionally, as mentioned above, women´s income increased more than those of their male counterparts. This is a reflection of the project's overall promotion of women engagement in decision-making and capacity-building initiatives based on women's concerns addressed in the community meetings which included their avid interest in agricultural activities.

Gender-specific capacity building activities were provided as needed. Above, SGP Technical Advisor and project partners have a one-to-one evaluation session with a female farmer on the community-installed irrigation systems during project site visits.

Contacts

Associação Amigos Desenvolvimento Comunitário Desenvolvimento Comunitário
Adilson Reis
President
Tel: +238 271 1138

GEF SGP Cabo Verde
Ricardo Monteiro
National Coordinator
United Nations Development Programme
UNDP Tel: +238 260 9688
Email: ricardom@unops.org

GEF Small Grants Programme
Charles Nyandiga and Annalisa Jose
Central Programme Management Team
304 East 45th Street, 9th Floor
New York, NY 10017
Email: sgp.info@undp.org